

**MARK C. GRIVETTI, P.G., C.HG., C.E.G.**

**investigation and remediation  
due diligence assessments  
geologic and hydrogeologic evaluations  
litigation support**

## **EDUCATION**

M.A., Geology University of California, Santa Barbara, 1982

B.A., Geology, University of California, Santa Barbara, 1979

## **REGISTRATIONS AND CERTIFICATIONS**

Professional Geologist, California, No. 4272

Certified Engineering Geologist, California, No. 1370

Certified Hydrogeologist, California, No. 211

## **CAREER SUMMARY**

Mr. Mark C. Grivetti, P.G., C.Hg., Principal Hydrogeologist based in southern California, focuses on strategy development and implementation for characterization and remediation of hazardous waste sites, including many refineries, terminals, UST and other petroleum hydrocarbon sites. This experience includes assessment and remediation of LNAPL and other petroleum hydrocarbons in complex, alluvial soil systems and aquifers. For example, Mr. Grivetti oversaw the characterization and remedial strategy development for a 400+ acre former refinery/terminal in southern California. He leads a group of four petroleum companies in a joint evaluation of oxygenate impacts to deep (500+ feet) drinking water aquifers in the Carson area. He also served on the National Groundwater Association's Deep Groundwater Investigation Interest Group.

### **Investigation and Remediation**

***Remediation of 400+acre Former Refinery, Active Tank Farm, and Chemical Storage Facility, Southern California.*** Mr. Grivetti served as Project Manager assisting a major oil company to coordinate the efforts of various consultants and major subcontractors in the investigation and remediation of an extremely complicated contaminated site. A significant issue for the site is the presence of LNAPL under approximately 40% of the site. Geosyntec performed an extensive characterization of the LNAPL using ROST and other tools. This work demonstrated that only a portion of the LNAPL was actually recoverable. Another significant challenge at the site is a mile+ long oxygenate plume

associated with the site and characterization of aquifers associated with this plume down to 600+ feet. Also responsible for coordination of efforts to negotiate a new regulatory order for site cleanup. Has facilitated strategy development and implementation with client, agencies, and other team consultants on the project. Work has included issues related to RCRA units within a larger site under RWQCB/EPA oversight.

***Facilitator, Carson Regional Groundwater Group, Carson, California.*** Serves to facilitate the activities of three co-located major refineries and terminals in Southern California in their efforts to jointly address offsite oxygenate groundwater impacts. The work is focused on deep (500+ feet) aquifers used as the primary source of groundwater for municipal and domestic use in the Los Angeles Basin. In addition to coordinating and directing investigative work, he serves as liaison with Federal and State regulators (DTSC, RWQCB, and EPA). His mission is to coordinate and build consensus among all Group members in evaluation of possible future impacts to groundwater producers in the area, as well as preparation and submittal of the results to regulators. Work has included preparation of RCRA EI submittals for the joint sites, drilling and testing of 28 deep monitoring wells (up to 600+ feet), and oversight of a \$1 million+ groundwater modeling effort for the project.

***Investigation and Remediation of MTBE in Drinking Water at a Refinery, Bakersfield, California.*** Drinking water had impacted one drinking water well and threatened more than 20 others. Tasks included setup of a field office and oversight of investigation and implementation of remedial systems consisting of ex-situ treatment by bio-GAC. Responsible for oversight and coordination of various site/consultants/contractors, permitting, design, and construction of systems to gain containment/treatment of the plume. System design, permitting and construction were accomplished in a 6-month time frame under tight regulatory control.

***Evaluation of Air Pathway Impacts from LNAPL in an open channel, Southern California.*** Odor complaints from nearby neighbors triggered the need to evaluate impacts to air surrounding an area where LNAPL leaked from beneath an open channel. An air sampling strategy was developed to obtain samples of air upwind and downwind of the channel on days when LNAPL was present.

***Assistance with Development of 2012 California LUFT Manual.*** Working under contract to the Western States Petroleum Association (WSPA), led substantial redraft of the site investigation, risk assessment, and vapor intrusion sections of the LUFT manual published in 2012.

***Remedial Investigation, Natural Gas Processing Facility, Central California.***

Principal Investigator for the Remedial Investigation at a large natural gas processing facility containing extensive PCB and petroleum hydrocarbon contamination. The site is adjacent to an environmentally sensitive coastal habitat in central California. Tasks included collection and analyses of over 1,500 soil samples and evaluation of hydrogeologic properties of five aquifers under DTSC oversight.

***Closure of Open LUFT Site Under Low Threat Closure Policy, Southern California.***

Completed vapor intrusion testing and associated analysis to convince regulator to close site under LTCP.

***Investigation and Remediation of a Former Oil Field Landfill, Orange County, California.*** Mr. Grivetti managed various aspects of the investigation and remediation at a 40-acre former petroleum and industrial waste landfill (multi-party site) in Huntington Beach. Evaluation of the extent of LNAPL impacts and mobility assessment was a key component of the work. The site is currently under DTSC oversight. Mr. Grivetti managed a significant RI/FS for soil and groundwater, and aspects of various initial remedial actions including a \$7million emergency removal action. Key issues at the site include interaction with agencies to remove groundwater as pathway of significant concern, proximity of sensitive habitat, residences, a high school and park adjacent to site. Provides strategic input on redevelopment issues.

***Third Party Oversight and Consulting Related to Site Redevelopment Over a Former UST site, Southern California.*** Assisted a developer in gaining approvals from regulators to construct a surgery outpatient unit over a former UST site which was still undergoing investigation and remediation. Site had been open > 25 years.

***Facilitator of Expert Panel Meetings, Boeing Santa Susana Field Lab.*** As part of Geosyntec's overall design of engineered natural treatment systems for control of surface water at portions of the facility, Mr. Grivetti served as facilitator for public meetings. An expert panel composed of national experts in stormwater issues reviews all design elements and regularly interfaces with the public to answer questions and receive input.

***Investigation and Remediation at an Active Aerospace Manufacturing Facility, Southern California.*** Oversees ongoing investigation and remedial efforts related to former chlorinated solvent releases and MTBE release from a former UST at a current aerospace manufacturing facility. Work is complicated by the fine-grained nature of site soils and difficulties associated with implementation of remediation in the logistically challenging site.

***Evaluation/Corrective Action of Vapor Intrusion at an Office Building, Southern California.*** Routine evaluation of groundwater revealed the potential for vapor intrusion impacts associated with chlorinated solvents into an office building occupied by a longstanding law firm. Tasks included subsurface slab and soil testing, modeling, indoor air testing, and corrective action.

***Investigation and Remediation related USTs in a new mall development.*** Work included removal and soil remediation associated with 12 USTs, 11 of which came as surprises during construction.

***Investigation and remediation of soil and groundwater at a Gasoline Retail (LUFT) Site in Spain.*** Installed the first free product recovery system in Spain related to an active retail site with substantial impacts in a dense residential neighborhood.

***Remediation, Former Gasoline Retail (LUFT) Site, Southern California.*** Designed and oversaw remediation by innovative excavation method of contamination related to leaking USTs adjacent to a historic building site.

***Investigation and Remediation, Former Manufactured Gas Plant Site, Santa Barbara, California.*** Project Manager for a former MGP waste site containing various generator/purifier wastes at a site proposed for redevelopment as a new bus terminal. Tasks included forensic evaluation of waste to determine source (oil vs. coal) for allocation purposes, complete site investigation including shallow groundwater containing PAHs and cyanide, development of a health risk assessment with remedial action goals, and oversight of all cleanup activities.